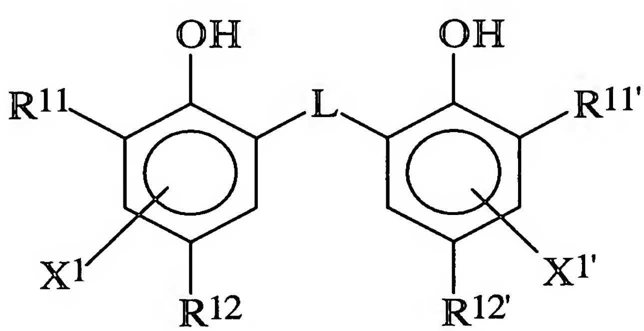
WHAT IS CLAIMED IS:

1. A photothermographic material comprising, at least a photosensitive silver halide, a non-photosensitive organic silver salt, a reducing agent and a binder on at least one side of a support, wherein a content of silver iodide in the photosensitive silver halide is 5% by mole or more, the binder contains polymer latex in an amount of 60% by weight or more, and the reducing agent is a compound represented by the following general formula (R):

General formula (R)



wherein R^{11} and $R^{11'}$ each independently represent an alkyl group having 1 to 20 carbon atoms, R^{12} and $R^{12'}$ each independently represent a hydrogen atom or a group capable of substituting for a hydrogen on a benzene ring, L represents a -S- group or a $-CHR^{13}-$ group, R^{13} represents a hydrogen atom or an alkyl group having 1 to 20 carbon atoms, and X1 and $X1^{1}$ each independently represent a hydrogen atom or a group capable of substituting for a hydrogen on a benzene ring.

2. The photothermographic material according to claim 1, wherein the polymer latex is a polymer having a glass transition temperature of -20°C to 60°C.

3. The photothermographic material according to claim 1, wherein the polymer latex contains a styrene-butadiene copolymer.

4. The photothermographic material according to claim 1, wherein the binder contains polymer latex copolymerized using 10% by weight to 70% by weight of the monomer represented by the following general formula (M):

General formula (M)

$CH_2=CR^{01}-CR^{02}=CH_2$

wherein R^{01} and R^{02} are each independently a hydrogen atom, an alkyl group having 1 to 6 carbon atoms, a halogen atom or a cyano group, provided that R^{01} and R^{02} are not both hydrogen atoms.

5. The photothermographic material according to claim 4, wherein, in general formula (M), R^{01} is a hydrogen atom and R^{02} is a methyl group.

6. The photothermographic material according to claim 4, wherein the polymer latex is copolymerized using 1% by weight to 20% by weight of a monomer having an acidic group.

7. The photothermographic material according to claim 4, wherein a glass transition temperature of the polymer latex is -30°C to 70°C.

8. The photothermographic material according to claim 4, wherein a glass transition temperature of the

polymer latex is -10°C to 35°C.

9. The photothermographic material according to claim 4, wherein the polymer latex contains a halogen ion in the latex solution in an amount of 500 ppm or less thereof.

10. The photothermographic material according to claim 4, wherein the polymer latex is a styrene-isoprene copolymer latex.

11. The photothermographic material according to claim 1, wherein R^{11} and $R^{11'}$ are each independently a secondary or a tertiary alkyl group having 3 to 15 carbon atoms, in the reducing agent represented by general formula (R).

12. The photothermographic material according to claim 1, further comprising a development accelerator.

13. The photothermographic material according to claim 12, wherein the development accelerator contains a compound represented by the following general formula (A-1):

General formula (A-1)

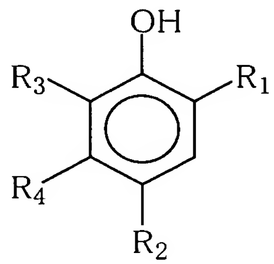
Q_1-NHNH-Q_2

wherein Q_1 is an aromatic group bonding to -NHNH-Q_2 via a carbon atom, or is a heterocyclic group; and Q_2 is a carbamoyl group, an acyl group, an alkoxycarbonyl group, an aryloxycarbonyl group, a sulfonyl group, or a sulfamoyl group.

14. The photothermographic material according to claim 12, wherein the development accelerator contains a compound represented by the following general

formula (A-2):

General formula (A-2)



wherein R_1 represents an alkyl group, an acyl group, an acylamino group, a sulfonamide group, an alkoxycarbonyl group, or a carbamoyl group; R_2 represents a hydrogen atom, a halogen atom, an alkyl group, an alkoxy group, an aryloxy group, an alkylthio group, an arylthio group, an acyloxy group, or a carbonic ester group; and R_3 and R_4 each independently represent a group which can be substituted for a hydrogen on the benzene ring.

15. The photothermographic material according to claim 1, further comprising an organic polyhalogen compound as an antifoggant.

16. The photothermographic material according to claim 15, wherein the organic polyhalogen compound is represented by the following general formula (H):

General formula (H)

$Q\text{-}(Y)n\text{-}C(Z_1)(Z_2)X$

wherein Q is an alkyl group, an aryl group, or a heterocyclic group;, Y is a divalent linking group; n is 0 or 1; Z_1 and Z_2 are each a halogen atom; and X is a hydrogen atom or an electron attractive group.

17. The photothermographic material according to

claim 1, wherein the content of the silver iodide in the photosensitive silver halide is 40% by mole or more.

18. The photothermographic material according to claim 1, wherein an average grain size of the photosensitive silver halide is 5 nm to 80 nm.

19. The photothermographic material according to claim 1, wherein an average grain size of the photosensitive silver halide is 5 nm to 40 nm.

20. The photothermographic material according to claim 1, wherein the photosensitive silver halide is formed in the absence of the non-photosensitive organic silver salt.

21. The photothermographic material according to claim 1, further containing a compound that can be one-electron-oxidized to provide a one-electron oxidation product which releases one or more electrons.

22. An image forming method using the photothermographic material according to claim 1, wherein the photothermographic material is exposed by scanning with a laser beam.

23. The image forming method according to claim 22, wherein the laser is emitted from a laser diode.

24. The image forming method according to claim 23, wherein the laser diode has a peak strength in a wavelength of 350 nm to 440 nm, and has an intensity of 1 mW/mm^2 to 50 W/mm^2.

25. The image forming method according to claim

23, wherein the laser diode has a peak strength in a wavelength of 380nm to 410 nm.